BULLETIN
OF THE
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Concerning some Names for Cucurbitæ.

By E. Lewis Sturtevant.

Cucurbita.

The ancient Latin name for the gourd, *Lagenaria*. This identification fulfils all the conditions of the context, wherever I have found the word used, and is rendered the more certain by the statement of Albertus Magnus, 13th century, that the cucurbita has white flowers. The earliest figure that I have seen is in the *Herbarium Maguntæ*, 1484. In 1536, under *Cucurbita*, Brunfelsius figures a gourd, and in Mathiolus' Commentaries, 1560, a pumpkin in figured under the name *Cucurbita Indica*.

Melo.

A Latin word which is used by Palladius about 210 A. D. He speaks of *melones* as being sweet and odorous. In the 13th century Albertus Magnus says "melones, quæ alio nomine pepones" vocantur. Hence *Cucumis melo*, L. as also the *Melon* of Crescentius.

The word melon was used for the pumpkin by Lyte, 1578 and 1586, Gerarde, 1597, Parkinson, 1629 and Ray, 1681; apparently by Cartier, 1535, Hariot, 1586, certainly by Kalm, 1770 and Carver, 1776.

Melon.

A Greek word for an apple, or any tree-fruit, as *melon Kudonion*, the quince; *melon Persikon*, the peach. Hence *melopepon*, an apple-shaped pepon.

Pepo.

This Latin word appears in Pliny, about 79 A. D., where he says *cucumeres* when they obtain excessive size are called *pepones*. In the Roman writers on husbandry the word does not occur. In the 3rd century, Apicius Coelius, a writer on cookery, gives like directions for preparing *pepones* and *melones* for eating, i. e., raw, with spices, as does Parkinson in 1629, for the melon, "with salt and pepper (and good store of wine)." In the 9th century Walafridus Strabo, in his Hortulus, speaks of the *pepo* as a round juicy fruit of delicious taste, but his poetry is too discursive to quote. In the 8th century Charlemagne names *peponas* among the vegetables ordered to be cultivated on his estates, but there is no context, yet as the *pepo* in the 9th century was a melon, we may believe *peponas* to be melons. In the 13th century Albertus Magnus describes his *pepo* as a synonym of *melo*, and as a fruit in whose cavity the seeds float without order. The *pepo* of Vergelius, 1532, is a melon. In 1536 Ruellius says the *pepo* and *melopepo* differ but in form and size, the large melons being *pepones*, or *pompons* in the vernacular French, the round melons *melopepones*. In 1539 Stephanus gives *pompon* and *peponam* as the French vernacular for *pepo*, the melon, and describes a fruit whose flesh is softer, smother, and more insipid than the *melopepo*: a remark that would discriminate to-day between our long yellow muskmelon and round nutmeg melon. The *pepo* of Dorstenius, 1540, is a melon, as also of Roslin, 1550, Lonicerus, 1557, Mizaldus, 1560 and 1565, and Scaliger, 1566.

In 1554 Dodonæus calls three forms of the pumpkin: pepones magni, pepones rotundi, pepones lati. Yet the "Melon and Pepon" of Caesalpinus, 1583, is the melon.

Pepon.

A Greek word used as an adjective, signifying ripe, by Herodotus, 443 B. C., Hippocrates, 430 B. C., Xenophon, 401 B. C., Theophrastus, 322 B. C. and Galen, 164 A. D., and apparently by Galen for the melon. The *pepon* of Scaliger in his commentaries on Aristotle and Theophrastus, is a melon. Homer calls the Achaeans *pepones*, weaklings: i. e. soft and tender. According to Porta, 1592, 'Phanias says *pepones* are eaten when the seed is

removed, but cucumbers are eaten whole. Speusippus calls the gourd *pepon*.' We note *sikuos pepon* and *pepon* used interchangeably in Aristotle, the *sikuos* being eaten unripe and the *pepon* when ripe. The word is said to be derived from *pesso*, to soften, to ripen.

Pepons was an English name for pumpkins as given by Lyte, 1578 and 1586, also Lobel, 1591. The French *pepom* was used for the melon by Lonicerus, 1557, as already noted: the Italian *pepon* by Camerarius, 1586. In 1786 Duchesne gives *pepon* as the French equivalent for *Cucurbita Pepo*, as does Naudin in recent times, and *pepon* is at present a modern Spanish name for the watermelon. These remarks should come rather under *pepo*, as being derived more probably from the Latin than from the Greek.

According to Sprengel the *pepon* of Theophrastus and the *eteros pepon* of Hippocrates is the watermelon, the *Sikuos pepon* of Hippocrates the melon, and the *pepon* of Dioscorides the pumpkin, but in this latter case he certainly is in error.

MELOPEPO.

This Latin word first appears in Pliny, about 79 A. D., in lib. XIX, c. 23, where he says 'a new form of *cucumer* has lately been produced in Campania, ressembling a quince [in smell?]. These are called *melopepones*. They are not pendant, but they are round as they lie on the ground. They are remarkable, in addition to their shape, color and smell, that when ripe they separate spontaneously from the stalk.' The modern Christiana melon fulfils all the conditions of this description.

The *melopepo* of Brunfelsius and Ruellius, 1536, Stephanus, 1539 and Dorstenius, 1540, is the melon. In 1550 it was used for the pumpkin by Eucharius Roslin, and for the summer squash by later writers.

MELOPEPON.

A Greek word which does not seem to be synonymous with the Latin *melopepo*. Heyschius, a Greek lexicographer of uncertain date, called the *melopepon*, *sikuos spermapas* or seeding cucumbers, as usually translated, as also does Athenæus about 200 A. D. Galen, about 164 A. D., says the interior flesh of the

melopepon is eaten, while in the *pepon* it is rejected. If we translate *sikuos spermapas* as a cucumber with seed in the flesh, we would have the watermelon as it popularly might be described. In the Geoponics, a compilation of about 920 A. D., *melopepons* are described as cooling, as quenching thirst in fevers, and it is implied that the fruit is occasionally bitter: remarks that would apply to the watermelon. The relationship to the cucumber, as indicated by the appellation *sikuos spermapas*, finds like expression in the watermelon names of more modern terms, such as citrull cucumber of Lyte, 1578 and Gerarde, 1597; concombre citrin of Dodonæus, 1554, Lobel, 1591, etc., or even a like name with the cucumber, as cocomber, cogombro, and gurchen of Pinaeus, 1561; concombre in Charante, France, as late as 1827, etc.

PUMPKIN.

The first appearance of this word that I detect is in Evelyn's translation of Quintyne, 1693. The pumpkin was called *pepons* and *pompons* by Lyte, 1578; *pompion* by Gerarde, 1597; *pumpion* by Smith, 1614; *pompeon* and *pumpeon* by Worlidge, 1683; *pumkin* and *pumpkin* by Evelyn, 1693; *pompkin* in Miller's Botanicon, 1722. The foreign words of similar derivation are the Belgian *pepoen, pompoen,* the French *pepon* and *pompon,* the German *peponen,* the Italian *pepon, pepone, peponi, poponi,* the Swedish *pompa, pumpa.*

May not the origination of the word *pumpkin* be from pomekin, a kind of pome? In 1536 Ruellius says Palladius called melons 'melones a malorum figura, quasi pomeos appellant,' which name yet remains. It is more fanciful than correct to suggest the derivation from *pomp,* the radical sense being to swell, to dilate, and *kin* a kind. But historically it is seen that the origin is from *pepo, pepon, pompon,* words once in use for the melon, and which were transferred, along with modifications, to the pumpkin about 1554.

CITRULLUS.

This word, which appears as *Citrullus vulgaris,* Schrad., *Cucumis citrullus,* Ser. and *Cucurbita citrullus,* L., also appears in the earlier English name for the watermelon as *citrulls, cucumber citrulls* and *pome citruls,* and is allied to the *concombre citrin* of

the French of 1554, 1578, 1590, etc. The word *citrullus* does not occur in the writers on Roman husbandry, nor in Macer Floridus, nor in the Hortulus of Walafridus Strabo, nor in Andrew's Latin Lexicon. In the 13th century Albertus Magnus says the seeds of *citrulus* are like those of the *cucumis* and *pepo*, and his *pepo* is a melon. Crescentius, of the same century, says, in his edition of 1474, that *citruli* are better when small, tender, green and crisp, and are not as good when they yellow, while *cucumeres* are better as they ripen and become soft and smooth. He speaks of the *melanguli*, which are eaten unripe *like the citrullus* and as being of the same savor. In 1536 Ruellius speaks of *citruli* or *turcicæ*, the same names used later for a pumpkin. In 1539 Stephanus speaks of *citrulus* as having dissected leaves, which implies a watermelon. In 1542 Fuchsius figures the watermelon as *cucumer citrulus*, German *citrullen*, and says the pumpkin is also called *citrulus* from its yellow color, and under the name *citrullus* the watermelon is figured in Ruellius' Dioscorides, 1550, Pinaeus, 1561, Morison, 1681, etc. The *citreolus* of Caesalpinus, 1583, appears to be a cucumber.

In Pliny we find *cerini* named among *cucumeres*, and this is translated *citrini* by Ruellius, 1529. Barbarus, who died in 1493, says *citrini cucumeres* were commonly called *citrioli*, that they were larger than the common kind and not striate. In 1542 Fuchsius says the cucumber is called *cucumer citrinus* because it yellows as it ripens.

In the 3rd century Apicius Cœlius gives directions for preparing *citrini*, *cucumis*, *pepo* and *melo* for eating, all to be eaten raw with spices. In the 12th century Ibn-al-Awam, a Moorish Spaniard, mentions the cucumber of a citrin color. In 1629 Parkinson describes a long yellow cucumber, and in 1747 Rumphius a Chinese cucumber in Amboina which he says is like those called in Italy *citrulli*.

It would hence appear that citrullus in early times was a name for a kind of cucumber or a class of cucumbers; in later times an appellation of the watermelon and pumpkin. The large yellow cucumber of Vilmorin, weighing 3½ lbs., at first pale yellow, then bright yellow when ripe, would seem to answer as the type of the *citrullus* of early writers, as well as any.

The best proof that I have discovered, of the existence of the melon among the Romans, says De Candolle, is a fruit figured very perfectly in the fine mosaics of fruits in the museum of the Vatican. Dr. Comes certifies that a half melon is represented in a drawing at Herculaneum. Hence we find a certainty in the fruit, but a doubt is expressed as to the nomenclature, and here is where I think I have suceeded in throwing some light. The summary of my examinations of the meaning of these words used before the discovery of America are, as probabilities:—

Citrullus	=	*Cucumis sativus.*
Cucurbita	=	*Lagenaria vulgaris.*
Melo	=	*Cucumis melo.*
Melopepo	=	*Cucumis melo.*
Melopepon	=	*Citrullus vulgaris.*
Pepo	=	*Cucumis melo.*
Pepon	=	*Cucumis melo.*
Pumpkin	=	modern name for *Cucurbita maxima, Pepo, moschata.*

Sphærella gossypina, n. sp., the perfect Stage of Cercospora gossypina, Cooke.*

By Geo. F. Atkinson.

Plate CXXII.

Several times during the autumn of 1890 I found at Auburn, Ala., specimens of a *Sphærella*, few in number, on leaves of *Gossypium herbaceum.* The leaves also have specimens of *Cercospora gossypina*, Cooke, and I suspected the generic connection of the two, though no special stress was laid upon the coincidence, because the leaves were also badly infected with a variety of other fungi. However, during the following winter in looking over a quantity of cotton leaves sent me by correspondents, I found the same *Sphærella* on leaves from Eutaw and Alberta Station, Ala. The leaves were remarkable for being almost covered with a profuse growth of the *Cercospora* on both sides. The *Sphærella* was also very abundant, and I felt warranted in regarding it, with a good degree of certainty, as the perfect stage of *Cercospora.*

*Read before the Botanical Club A. A. A. S. Washington meeting, Aug. 20, 1891.

The perithecia are immersed in the tissue of the leaf, the ostiolum and the upper surface projecting through the epidermis. They occur abundantly on either side of the leaf. The sutures of the reticulated surface are quite black, giving a very dark appearance to the perithecia. They measure 60–70 × 65–90 μ.

The asci are subcylindrical, varying to slightly clavate or lanceolate, and measure 8–10 × 40–45 μ. They are eight-spored, though it is difficult without rupturing them to ascertain that number.

The spores are elliptical, or nearly fusoid, and when mature constricted at the septum, one cell being usually somewhat smaller than the other. They are obliquely uniseriate or partly biseriate, and measure 3–4 × 15–18 μ.

In the plate illustrating the article I have included the *Cercospora* stage, the three figures representing variations in the length of the hyphæ and conidia, as determined by different conditions of weather, a warm humid atmosphere, with abundant rains, conducing to a very profuse growth.

All the figures are drawn with aid of the camera lucida to the same scale except the free ascospores, which are a trifle larger.

EXPLANATION OF PLATE.

Sphærella gossypina, Atkinson, n. sp. Figs. 1, 2, 3, different conditions of the *Cercospora* stage. Fig. 4, perithecium with asci escaping; fig. 5, asci with ascospores; fig. 6, ascospores.

DEPARTMENT OF BIOLOGY,
ALABAMA POLYTECHNIC INSTITUTE,
AUBURN, ALA., AUG. 6, 1891.

Plants Introduced at Sellsville, near Columbus, O.*

The place has been used by the Sells Brothers as the winter quarters of their circus and menagerie for the past twelve years. All of the list below were discovered since October 1, 1890, by those connected with the University Biological Club.

Those marked with an * are not known to occur elsewhere in the State.

Erodium cicutarium, L'Her; also at Painesville, Lake Co.

* *Callirrhoe Papaver*, Gray ?

* Read before the Botanical Club A. A. A. S., Washington meeting, August 22, 1891.

Artemisia annua, L.; has also appeared in nursery at Painesville at various times, but not permanent.

* *Amphiachyris dracunculoides*, Nutt.

* *Aster paucifiorus*, Nutt.

Dysodia chrysanthemoides, Lag.; also found at Westerville, Franklin Co.

* *Gutierezia Texana*, T. & G.

* *Helenium nudiflorum*, Nutt.

* *Helenium tenuifolium*, Nutt.

* *Parthenium Hysterophorus*, L.

* *Solanum rostratum*, Dunal.

* *Monarda citriodora*, Cerv.

Amarantus chlorostachys, Willd.; also Lorain Co.

Amarantus blitoides, Watson; this plant is quite common about Columbus, abundant along the L. S. & M. S. R. R. tracks in Northern Ohio.

Amarantus spinosus, L.; has been growing in other parts of the State for nearly twenty years.

* *Croton capitatus*, Michx.; one plant only.

Chenopodium ambrosioides, L., var. *anthelminticum*, Gray; not rare throughout the State.

* *Avena fatua*, L.

W. R. LAZENBY.

A New Egg-Plant Disease.*

Egg-plants in New Jersey have been seriously troubled with fungous enemies during the past two years. Of these the *Phyllosticta hortorum*, Speg., is perhaps the worst upon the leaves and fruit, causing the former to blight, and the latter to rot prematurely. A species of grey mould, (*Botrytis fascicularis* (Cd.) Sacc), hastens the decay of the mature fruit, and occasionally an Anthracnose, (*Glœosporium melongenæ*, E. and Hals.), seen for the first time last year, is met with. But the greatest complaint has been of the dying of the young plants while still in the hot-bed, or shortly after they are set in the field. The truckers sometimes speak of this trouble as a "damping off," because it

*Read before the Botanical Club of the A. A. A. S., Washington meeting, Aug. 20, 1891.

is located near the ground, and at this point the young stems decay and break down. During the present year this disease has been under consideration, and its fungous nature established. Specimens of the young plants that have early fallen victims to the fungus show only a cobwebby mass of mycelium upon the diseased parts, and in themselves offered only discouragement to the further study of the trouble. Several hot-beds were visited, and in some cases after the healthy plants had been culled out. It was here that specimens of the trouble were obtained that furnished a clew to the nature of the fungus. These plants showed a dead base to the stem, not more than a third the normal size, and upon the surface were small pimples, slightly darker than the surrounding dry substance. Upon making thin sections and examining the fungus, it proved to be a *Phoma* with many of the pycnidia entirely subterranean, while the others were partly superficial.

Three inch pieces of young, healthy stems were sterilized for test tube cultures, and upon these, at first three in number, the *Phoma* was inoculated with a full measure of success in all cases. The treated stems became contracted and covered with the pycnidia of the *Phoma* as in the original. From these in turn other stems were inoculated.

In the meantime the threads from the damped off specimens of another hot-bed had been placed in agar tubes, from which developed the pycnidia. While differing somewhat in shape from those upon the stems, they had the contents of minute spores—hyaline and 3-16 by 2 μ—thus showing that this *Phoma*, (*P. Solani*, Hals.), in its vegetative condition upon young seedlings is one of the so-called damping-off fungi.

BYRON D. HALSTED.

Notes on Some Curious Fungi.*

A curious resinous fungus was found in California on living pine trees, and which Mr. Ellis thought might be *Polyporus officinalis*, Fr. The specimen exhibited was brought to the Agricultural Department by J. Stanley Brown, of the Geological Survey, who had discovered its fungous nature, and wished

* Read before the Botanical Club, A. A. A. S., Washington meeting, August 22d, 1891.

to have it examined. Some time before a specimen had been discovered on the ground in San Bernardino Co., California, and described as a new mineral, which was named Bernardinite.

A fungus very similar to this is sometimes found in the pine woods of Michigan, and is described in Vol. II. of the Journal of Mycology, by W. W. Calkins. The fungus is mostly composed of resin granules formed around knots of mycelium, and containing one or more curiously shaped bodies, sometimes resembling branching bast cells, which are evidently outgrowths of the mycelium. In some places are mycelial strands composed of nearly parallel hyphæ. The pores of the fungus were worn away, only indications of their presence remaining, and no spores could be found; moreover, no authentic specimen was at hand for identification; the real identity of the fungus is, therefore, still an open matter. The method in which the resin was secreted and deposited is also a question for further investigation.

Two other fungi may be briefly noted. One on *Muhlenbergia* appears like an *Erysiphe* with the low power of the microscope, but the conceptacle is crowded full of colorless cells or spores, with thick walls and granular contents. The other is a superficial fungus on bark of orange, and will probably prove to be a new species of the genus *Phymatomosphæria*.

EFFIE A. SOUTHWORTH.

Botanical Notes.

A Double-headed Rudbeckia. Yesterday while gathering a handful of heads of *Rudbeckia hirta* a very unusual specimen was found that seems worthy of passing notice. Instead of a single dark cone with its long fringe of yellow ray-flowers, there were two closely joined upon the same stem, and each was possessed of a full circle of the rays. The heads were so close together that both were equally thrown out of the normal position, one facing the east and the other the west at an angle of about forty-five degrees. BYRON D. HALSTED.

RUTGERS COLLEGE, June 21st, 1891.

An Economical Maple. In the August BULLETIN, Mr. Sargent has a note on an economical linden that sent roots into a decayed portion of its own trunk. He says he has not noticed this

peculiarity in trees of other sorts. Perhaps I can give some additional information on the subject. Last fall my attention was called to this growth in a willow and in a number of swamp maples at Great Neck, L. I. The maple that we examined especially, and of which photographs were taken, had apparently been split and twisted by a storm. One of the roots, at least two inches in diameter, started as high as ten feet above the base of the trunk, and passed down through the decayed portion to the ground. There were all sizes of roots, from this large one to the finest fibers, some reaching the ground, but most branching and spreading through the decayed trunk. Some specimens of the decayed wood filled with small roots and fibers were shown to the Club at the second meeting of last November, and in the spring several of the members visited the locality with me. Since this growth has been found in the linden, the willow, and the maple, trees of such different orders, it seems probable that it may exist in the case of many others that have heretofore escaped observation.

LOUISE MERRITT STABLER.

BARNARD COLLEGE, New York.

Another Economical Maple. An interesting case of similar nature to that described by Prof. Sargent in the August number of the BULLETIN is found on a Norway maple in our college grounds. A large branch split off, showing that the splitting had started several years before, that the margins of the trunk had become well callussed, and from several points roots had extended into the cleft, which naturally became partially filled with dust and decaying bark. The largest root was an inch in diameter, divided considerably near the lower end, and was over two feet long.

WM. A. BUCKHOUT.

STATE COLLEGE, Penn.

A New Massachusetts Station for Carex æstivalis, M. A. Curtis. This rare species, so far as I know, has not been reported from Massachusetts since Dewey found it on Saddle

Mountain. I had the good fortune to find a few specimens of it this summer at Stockbridge, Mass. It was growing in rich, damp woods at the foot of Laurel Hill, and about thirty or forty feet from the southeast corner of Williams' Academy. The specimens agree in all respects with Prof. Bailey's description in the Revised Manual, except that the leaves are longer than the culm. CORNELIUS L. SHEAR.

Lespedeza striata (*Thunb.*), *Hook. and Arn.* The statement has been made that this plant was "accidentally introduced with imported goods from China into Charleston, S. C., about the year 1849." It may have been thus introduced there, but I wish to put on record that it was collected by me in August, 1846, in Central Georgia, on the roadside, remote from dwellings, between Monticello and Madison. A specimen, now in the Harvard Herbarium, was sent to Dr. Gray, who did not then recognize it, Since that time it has multiplied exceedingly and spread over the Southern Atlantic States and extended northwestward into Tennessee, Kentucky, and Missouri. In the east it is gradually creeping northward. It was collected in 1878 by Mr. Canby at Eastville on the Eastern Shore of Virginia, and last year by Mr. Hollick near Norfolk, and by Dr. Brinton in Hanover County. This year I found it quite abundant on the Rappahannock above Fredericksburg, so that its arrival on the Potomac near Washington may be soon looked for, if it be not there already.

THOS. C. PORTER.

The California Botanical Club was organized March 7, 1891, with the following officers: President, Dr. H. H. Behr; Vice-President, Mrs. Mary W. Kincaid; Secretary, Frank H. Vaslit; Treasurer, Miss Agnes M. Manning; Librarian, Miss Caroline L. Hunt; Curator, Miss Kate Elliot; Councillors, Mrs. C. E. Hansen, Mrs. M. J. McDonald, Dr. C. M. Blake. The charter roll, closed May 2d, contains ninety-nine signatures—an unusually strong beginning so far as numbers is concerned. The prominence of the gentler sex is an encouraging sign, judging from our own experience. A. H.

Dr. C. F. Millspaugh, Morgantown, W. Va., will issue a preliminary catalogue of the Flora of West Virginia the coming

winter; with his own work in the State he is desirous of compiling that of others as fully as possible. Any botanists who have worked in the State, and who will send the Doctor a list of the species they noted there, giving localities, will receive full credit, and six copies of the Flora as a return for the kindness.

Reviews of Foreign Literature.

Monographie du Genre Chrysosplenium. A Franchet. (Nouv. Arch. Mus. Hist. Nat. (III.) ii. 87-114, Pl. III.-VI.; iii. 1-32, Pl. 1-7; reprinted).

In this most beautiful monograph M. Franchet has given a detailed account of the fifty-four species of the genus known up to the present time, and illustrated nearly all of them on the accompanying plates, which are exquisite lithographs. The systematic portion of the work is prefaced by an account of the history of the genus from the time of L'Obel (1576), in whose work is found the first indication of the European plant as "Saxifraga aurea Lichenis facie et natalibus." The genus was first established by Tournefort. The vegetative and reproductive organs are clearly and concisely described, and the geographical distribution remarked upon as mainly Asiatic, five species only occurring in America (*C. alternifolium*, L., *C. Americanum*, Schwein., and *C. glechomifolium*, Nutt., in North America, *C. Valdivicum*, Hook. f., and *C. macranthum*, Hook. f., in Chili and at the Straits of Magellan), while but three species are known in Europe.

The genus divides itself naturally into two sections, Alternifolia and Oppositifolia. Of the first, our only representative is *C. alternifolium*, L., which M. Franchet attributes to Alaska, but which has been found much further to the south and east (Minnesota, fide Watson and Coulter); of the second, the widely distributed eastern *C. Americanum*, Schwein., readily distinguished from the western *C. glechomifolium*, Nutt., by its glabrous seeds, those of *C. Americanum* being covered with white hispid hairs of two kinds—the one very slender, the other thick and clavate, as is capitally shown in M. Franchet's figure.

Three Asiatic species are described as new, while a number of the others have first been made known by the author in his numerous valuable publications on the plants of China and Japan. N. L. B.

Index to Recent Literature Relating to American Botany.

Abnormal Water-Pore. (Bot. Gaz. xvi. 235, illustrated).

Description of a peculiar water-pore found in a leaf of *Tropæolum majus.*

Against the Using of Revertible Generic Names. Edward L. Greene. (Pittonia, ii. 185-195).

Professor Greene comes out squarely in support of the principle that a name once used is applicable only to the species or genus to which it was originally applied and not to any other. The following genera are taken up: *Xylothermia* in place of *Pickeringia*, Nutt. (1840) of the Leguminosæ, not Nuttall (1834) of the Myrsineæ, now referred to *Ardisia; Osmaronia* in place of *Nuttallia*, T. & G. (1840) of the Rosaceæ, not Raf. (1818), nor DC. (1821), nor Barton (1823); *Chrysamphora* in place of *Darlingtonia*, Torr. (1853) of the Sarraceniaceæ, not DC. (1825) of the Leguminosæ; *Lilæopsis* in place of *Crantzia*, Nutt. (1818), not Scop. (1777), nor Swartz. (1788), nor Schreb. (1789); *Nemoseris* in place of *Rafinesquia*, Nutt. (1841), not of Raf. (1838); *Tumion*, Raf. (1840) in place of *Torreya*, Arnott (1838), not of Raf. (1818 and 1819), nor of Spreng. (1821), nor of Eaton (1833).

Antiquity of the Last Glacial Period—The. N. S. Shaler. (Proc. Bost. Soc. Nat. Hist. xxv. 258-267).

The author utilizes the computed average rate of diffusion of tree life to calculate the probable time that elapsed since our hickory and walnut trees could have advanced from the southernmost extremity of the great ice sheet to where we now find them. It is assumed that they have advanced on an average over a belt about 400 miles in width, northward from the ancient ice front, and it is calculated, from data available at the present time, that each generation of trees (occupying a period of thirty years) advances about 200 feet by the natural dissemination of the seeds. On this basis it would take 300,000 years to traverse the 400 miles.

This result evidently startled the author and he hastens to say that it is evident the period is altogether excessive, and accounts for the necessary abbreviation of time by the more speedy carriage of seeds by rodents, tornadoes and primitive races of men. In conclusion he says: " Making allowance for the action

of these occasional means of dissemination, the impression remains that any such period as ten thousand years is insufficient to account for the northward spread of these slow marching forms. * * The fact * * that they extend in a continuous line from the Atlantic to Minnesota indicates that the advance has been accomplished by causes of a general and continuous nature. It thus seems to me that from the distribution of these large-seeded trees we are led to the conclusion that any such period as ten or even twenty thousand years is totally inadequate to account for the changes which have taken place in the distribution of our forests since the close of the glacial period."

A. H.

Boltonia asteroides. (Meehan's Month. i. 33, 34; pl. iii).

Botanical Club of the A. A. A. S. (Bot. Gaz. xvi. 261-264).

General account of the club meeting, at Washington, Aug. 20, 21, 22, with titles or abstracts of the papers read.

Botanical Papers at the Washington Meeting of the A. A. A. S. (Bot. Gaz. xvi. 255-261).

Titles and abstracts of papers read before Sec. F. and Sec. C.

Botanical Section of the American Association of Agricultural Colleges and Experiment Stations. Washington Meeting. Geo. F. Atkinson. (Bot. Gaz. xvi. 264-267).

General account of the meeting, with abstracts of papers and remarks.

Bromeliaceæ Herbarii Regnelliani. I. Bromeliæ. C. A. M. Lindman. Kong. Svenska Vet. Akad. Handl. xxiv. No. 8, pp. 50, 8 plates).

Description of the species of Bromeliaceæ contained in the herbarium of A. F. Regnell in the botanical museum at Stockholm. The plants are mainly from Brazil, and furnish new species in the genera *Nidularium, Karatas, Cryptanthus, Quesnelia, Æchmea, Billbergia,* and *Ananas,* besides the two new genera, *Wittrockia* and *Mosenia.* Throughout the work the original authors of species are cited in parentheses.

Calypso—The Home of. F. Blanchard. (Bot. Gaz. xvi. 241, 242).

Description of its occurrence in the cedar swamps of Vermont.

Carices—New California. Notes on Carex. XV. L. H. Bailey. (Reprint, Bull. Calif. Acad. Sci. iii. 104-106).

The following are described as new: *Carex obnupta*, *C. quadrifida*, *C. quadifida*, var. *lenis* and *C. monile*, Tuckm. var. *Pacifica*.

Cereus (*Pilocereus*) *Sargentianus*. C. R. Orcutt. (Gard. and For. iv. 436; f. 69).

Description and representation of a possible new species, heretofore referred to *C. Schottii*, Engelm.

Conifers on Mount Ranier. Chas. V. Piper. (Gard. and For. iv. 382; f. 63).

Tsuga Pattoniana, *Abies lasiocarpa*, *A. nobilis*, *A. amabilis*, *Chamæcyparis Nutkaensis* and *Pinus albicaulis* are noted.

Contributions a la Flore Bryologique du Bresil. V. F. Brotherus. (Acta Soc. Sci. Fennicæ, xix. 30 pp. Helsingfors, 1891, reprinted).

This is an enumeration of the mosses collected by Dr. E. Wainio previous to 1887, with description of twenty-six new species, several of which have been supplied with manuscript names by Dr. C. Müller and three *Sphagnums* described by Herr Warnstorf.

Contributions to American Botany.—XVIII. Sereno Watson. (Proc. Amer. Acad. Arts and Sci. xxvi. 124-163; reprinted).

This paper contains: I. Description of some new North American species, chiefly of the United States, with a revision of the American species of the genus *Erythronium*. The following are described as new: *Arabis Macounii* and *Silene Macounii* from British Columbia; *Erysimum arenicola* from Washington; *Mimulus filicaulis*, *Cladothrix cryptantha*, *Eriogonum minutiflorum* and *E. deserticola* from California; *Zostera Oregana* and *Z. Pacifica* (the latter already described as *Z. marina* var. *latifolia* by Dr. Morong), from the Pacific coast. Thirteen species of *Erythronium* are described, one of them, *E. montanum*, from Oregon and Washington, as new.

II. Descriptions of new Mexican species collected chiefly by Mr. C. G. Pringle in 1889 and 1890. Mr. Pringle's collections still continue to yield Dr. Watson an abundant crop of new species, there being about eighty-eight here characterized, together with two new genera, *Neopringlea* and *Oligonema*.

III. Upon a wild species of *Zea* from Mexico. The discov-

ery of a wild grass closely enough related to Indian corn to be placed in the same genus, is a fact of the greatest interest. The seeds were received by Dr. Watson from Professor A. Duges of Guanajuato, Mexico, and had been reported to him as growing wild at Moro Leon. This corn was planted at the Cambridge Botanic Garden, where it fortunately grew, producing plants over ten feet high. It differs considerably from any form of *Zea Mays* known to Dr. Watson, and he describes it as *Z. canina*, its local name being Mais de Coyote. The natives of the region in which ito ccurs believe that it is the original of the cultivated Indian corn. It is perhaps needless to remark here that up to the present discovery no *Zea Mays*, nor any grass closely resembling it, had been known in the wild condition.

IV. Upon a collection of plants from the Island of Ascention. This is an enumeration of the plants collected on that island by Mr. E. J. Loomis during the visit of the U. S. Eclipse Exploring Expedition of 1889. *Rubus nanus*, *Asplenium Ascentionis* and *Nephrodium* (?) *viscidum* are described as new. N. L. B.

Dacryopsis, *Massee—On.* (Grevillea, xx. 23–25).

Three species in this recently-erected genus are described from the New World: *D. gyrocephala*, *D. Ellisiana*, and *D. unicolor*.

Descriptions of New Plants, chiefly Gamopetalæ, collected in Mexico by C. G. Pringle. B. L. Robinson. (Proc. Amer. Acad. xxvi. 164–176; reprinted).

New species and varieties are described in the following genera: *Xylosma*, *Desmodium*, *Pimpinella*, *Eupatorium*, *Gymnolomia*, *Otopappus*, *Senecio*, *Laurentia*, *Lobelia*, *Nemacladus*, *Symplocos*, *Gonolobus*, *Buddleia*, *Cordia*, *Heliotropium*, *Omphalodes*, *Ipomoea*, *Bassovia*, *Withania*, *Herpestis*, *Gerardia*, *Castilleia*, *Justicia*, *Citharexylum* and *Scutellaria*.

Descriptions of *Mimulus Congdoni* and *M. gracilipes*, new species from California, and of *Aster Engelmanni*, Gray, var. (?) *paucicapitatus*, from Washington, are appended. N. L. B.

Destruction of California Wild Flowers—The. Chas. H. Shinn. (Gard. and For. iv. 382, 383).

Elisena longipetala. C. G. Van Tubergen, Jr. (Gard. xl. 110, illustrated).

Eucryphea pinnatifolia. (Gard. Chron. x. 217, 218; f. 27).

Eriogynia—A New. Wm. M. Canby. (Bot. Gaz. xvi. 236, 237).

E. Hendersoni is described as new. Collected in the Olympic Mountains, Wash., July 15, 1890, by Prof. L. F. Henderson.

Fasciation in Cnicus lanceolatus. J. W. Toumey. (Bot. Gaz xvi. 236; illustrated).

Flora Brasiliensis. Fasciculus CIX.—Malvaceæ. Carolus Schumann. (Folio, pp. 254–455; pl. 51–80).

Herr Schumann has given, in this part of Brazil's great flora, not alone the species of Malvaceæ occurring in that country, but also monographs of those found throughout South America in the genera *Sida*, *Abutilon*, *Gaya* and *Wissadula*, in all of which new species are characterized and new binomials formed by taking up earlier specific names. *Modiolastrum* is a new genus of two species originally described as *Modiolas*, both from Uraguay. Among names which replace some in common use, we note *Malvastrum Coromandelianum* instead of *M. tricuspidatum*, A. Gray, the plant having been originally named *Malva Coromandeliana* by Linnæus and *Sida acuta*, Burm (1768) instead of *S. carpinifolia*, L. (1781).

Flora of Patagonia—Further Contributions to the. John Ball. (Journ. Linn. Soc. xxvii. 471-500).

An annotated enumeration of the plants collected by Mr. William Andrews in Patagonia and presented to the Kew Herbarium in 1888, including ninety-two species, thirty-nine of which had not previously been reported from that country. No new species are described.

Flora of Orono, Me.—A Sketch of the. F. L. Scribner. (Bot. Gaz. 228-234).

Garden Weeds—Names of. Geo. G. Groff. (Am. Gard. xii. 488).

A list of thirty-six common names of weeds of the Eastern United States is given, with their botanical equivalents.

Geo. Thurber. (Ann. Hort. 1890, pp. 291-295, with portrait).

Girdled Trees. (Meehan's Month. i. 37; illustrated).

The general fact is noted that many trees will live for years after complete girdling, and a special instance is the subject of

illustration, in which a tree of *Pinus ponderosa* was girdled. The trunk below the girdling had four annual rings, while the part above had eight—showing that it lived four years after the injury and made wood all the time in its upper part, although at a standstill below.

Golondrina Plant—The. C. R. Orcutt. (West Am. Sci. vii. 190-195).

An account of the effect of certain *Euphorbias* as antidotes for snake poisoning.

Grass—A New. Geo. Vasey. (Bot. Gaz. xvi. 235, 236).

Melica (?) *multinervosa* is described as new, collected at Brazos Santiago, Tex., by G. C. Nealley, in 1891.

History of Garden Vegetables—The. E. L. Sturtevant. (Am. Nat. xxv. 694-706).

The plants mentioned in this contribution are *Stachys affinis;* Sugar Beet (*Beta vulgaris*, L.); Sweet Cicely (*Myrrhis odorata*, Scop.); Sweet Majoram (*Origanum*, sp.); Sweet Potato (*Con volvulus batatas*, L.); Tansy (*Tanacetum vulgare*, L.); Tarragon (*Artemisia dracunculus*, L.); Thyme (*Thymus*, sp.); and Tomato (*Lycopersicum*, sp.)

Is Asplenium Marinum Linn. found in America? W. Carruthers. (Journ. Bot. xxix. 251).

According to this note the reported occurrence of this species in America is due to errors of determination, and there appears to be no foundation for considering it an American plant.

Leaf-Bearing Terrane in the Loup Fork—On a. F. W. Cragin. (Am. Geol. viii. 29-32).

Contains lists of the leaves and diatoms found in a lacustrine marl deposit, probably of miocene age, near Alpine, Indian Territory.

Mexican Grasses. F. Lamson-Scribner. (Proc. Acad. Nat. Sci. Philadelphia, 1891, 292–309, Pl. XIII. and woodcuts).

An enumeration of the thirty-six species collected by Mr. Pringle in 1890, with critical notes and descriptions of the following as new: *Hilaria cenchroides*, H. B. K. var. *ciliatus; Muhlenbergia Schaffneri*, Fourn., var. *longiseta; M. articulata; Deschampsia Pringlei; Danthonia Mexicana; Bouteloua stolonifera; Leptochloa Mexicana; Brachypodium pinnatum*, Beauv. var. *cæspitosus.*

This is supplemented by an enumeration of those collected in 1890 by the expedition from the Philadelphia Academy under Prof. Heilprin, nine species, *Bouteloua Americana* and *B. Triæna* being new names.

Mexican Jumping Beans, and the Plant Upon Which They are Produced. C. V. Riley. (Am. Gard. xii. 552-554; illustrated).

The curious seeds known as "jumping beans" are described as the seeds of certain new species of *Sebastiana*, viz.: *S. Palmeri*, Rose, and *S. Pringlei*, Watson, from Mexico. Their peculiar movements, from which the name is derived, are due to the inclusion of the larva of a moth (*Carpocapsa saltitans*) whose motions cause the "jumping" when the beans are slightly warmed by contact with the hand. Similar phenomena are also noted in the seeds of *Colliguaja odorifera* from South America.

Newberry—Prof. John S. (New York Recorder, ii. 10; with portrait).

New or Noteworthy Species. Edward L. Greene. (Pittonia, ii. 167-173; advance sheets).

The following are described as new: *Erigeron multiceps*, from California, (Palmer and Wright, No. 121), *E. coronarius* from Chihuahua, (Pringle, No. 1275), *E. stolonifer*, much of which has been distributed as *E. flagellare*, from Colorado. The genus *Achætogeron* is not considered distinct from *Erigeron*, and its species are all placed in the latter. *Aplopappus Brandegeei*, A. Gray, is also regarded as an *Erigeron*, notwithstanding its yellow flowers, and named *E. aureus*. *Aster Elmeri*, *Arctostaphylos patula*, *A. media*, *Rhododendron Sonomense*, and *Eriogonum elegans*, all from California or Washington, are also here characterized.

Nomenclature—Some Neglected Priorities in Generic. Edward L. Greene. (Pittonia, ii. 173-184, advance sheets).

Professor Greene continues his researches into older generic names than those in common use, and points out that *Jacksonia*, Raf., (1808) antedates *Polanisia* of the same author, (1819), and *Jacksonia*, R. Br., (1811); *Kraunhia*, Raf., (1808), is older than *Wisteria*, Nutt., (1818); *Psilotrophe*, DC., (1838), should replace *Riddellia*, Nutt., (1841), not Raf., (1836); *Agoseris*, Raf., (1817),

antedates *Macrorhynchus*, Less., (1832); *Sitilias*, Raf., (1836), has priority over *Pyrrhopappus*, DC., (1838); *Adenostegia*, Benth., (1836), over *Cordylanthus*, Nutt., (1846); *Lappula*, Mœnch., (1794), over *Echinospermum*, Lehm., (1818); *Achroanthes*, Raf., (1808), over *Microstylis*, Eaton, (1822), Lindl. (1829), and *Spathyema*, Raf., (1808), over *Symplocarpus*, Salisb., (1818). The American species are renamed under these older genera.

North American Wood Lilies. (Gard. xl. 222, 223; pl. 821).

Descriptions of *Trillium erythrocarpum*, *T. erectum* and *T. grandiflorum*—the latter the subject of a colored plate.

Northern Pitch Pine—The. (Gard. and For. iv. 397, 398; f. 65).

Illustrated description of *Pinus rigida.*

Notes on North American Mosses.—II. C. R. Barnes. (Bot. Gaz. xvi. 205-207).

Critical notes upon species in the genera *Dicranum*, *Barbula*, *Webera*, *Atrichum*, *Hypnum* (*Thuidium*), *H.* (*Claopodium*), *H.* (*Camptothecium*), *H.* (*Isothecium*), *H.* (*Eurhynchium*). *Hypnum colpophyllum*, Sull., var. *flagelliforme*, is described as new. New localities are given for *Bruchia Hallii*, *Dicranum hyperboreum*, *Coscinodon Raui*, *Fabronia pusilla*, *Myurella Careyana* and *Leskea Austini.*

Oligonema. Sereno Watson. (Bot. Gaz. xvi. 267).

The author states that he finds it necessary to change the generic name *Oligonema*, recently erected by him, on account of having learned that there is a genus of the same name in the Myxomycetes which has priority. The name *Golionema* is proposed instead.

Our Native Plants.—III. (Vick's Mag. xiv. 243, 244, illustrated).

Contains a figure of *Calla palustris.*

Papaw—The. E. S. Carman. (Am. Gard. xii. 533, 534; illustrated).

General description of *Asimina triloba.*

Pinus cembroides. (Gard. and For. iv. 352, f. 59).

Poa annua—Note sur l'organogenie de. L. Durand. (Bull. Mens. Soc. Linn. Paris, i. 961, 962).

Podocarpus nubigena. (Gard. Chron. x. 171; f. 23).

Pollination of Helianthus—Notes on the. Walter H. Evans. (Bot. Gaz. xvi. 234, 235).

Pyrularia oleifera. (Am. Gard. xii. 576; illustrated).

Report of the Botanical Branch, 1890. Jas. Fletcher, R. B. Whyte, W. Scott. (Ottawa Nat. v. 80-84).

Contains memoranda upon important finds, a list of sixteen additions to the "Flora Ottawaensis," and a list of the species of *Sphagnum* found near Ottawa.

Revision des Fissidentacées de la Guadeloupe et de la Martinique. Emil Bescherelle. (Rev. Bryol. 18e Année, 49-55).

Sarcomyces—New Genus. G. Massee. (Grevillea, xx. 13, 14).

S. vinosa, on wood, Venezuela and South Carolina, is described.

Soulard Crab and Its Kin—The. L. H. Bailey. (Am. Gard. xii. 469-474, illustrated).

This is an account of a supposed accidental hybrid between *Pyrus coronaria* and the common apple, which is recognized as *P. Soulardi.* Figures of fruit, flower and leaf are given. *P. Ioensis* is described as a new species and figured, quoted as identical with *P. coronaria,* var. *Ioensis,* Wood.

Southern California Notes. C. R. Orcutt. (Gard. and For. iv. 351).

Papaver Californica and *Phacelia Orcuttiana* are noted as occurring immediately after regions have been burned over, seeming to be veritable "fire-plants." *Lathyrus splendens* and *Dicentra chrysantha* seem to be benefited by the advent of fire, and *Calochortus Weedii* often appears spontaneously in abundance over burnt districts.

Systematic Botany—The Future of. John M. Coulter. (Bot. Gaz. xvi. 243-254).

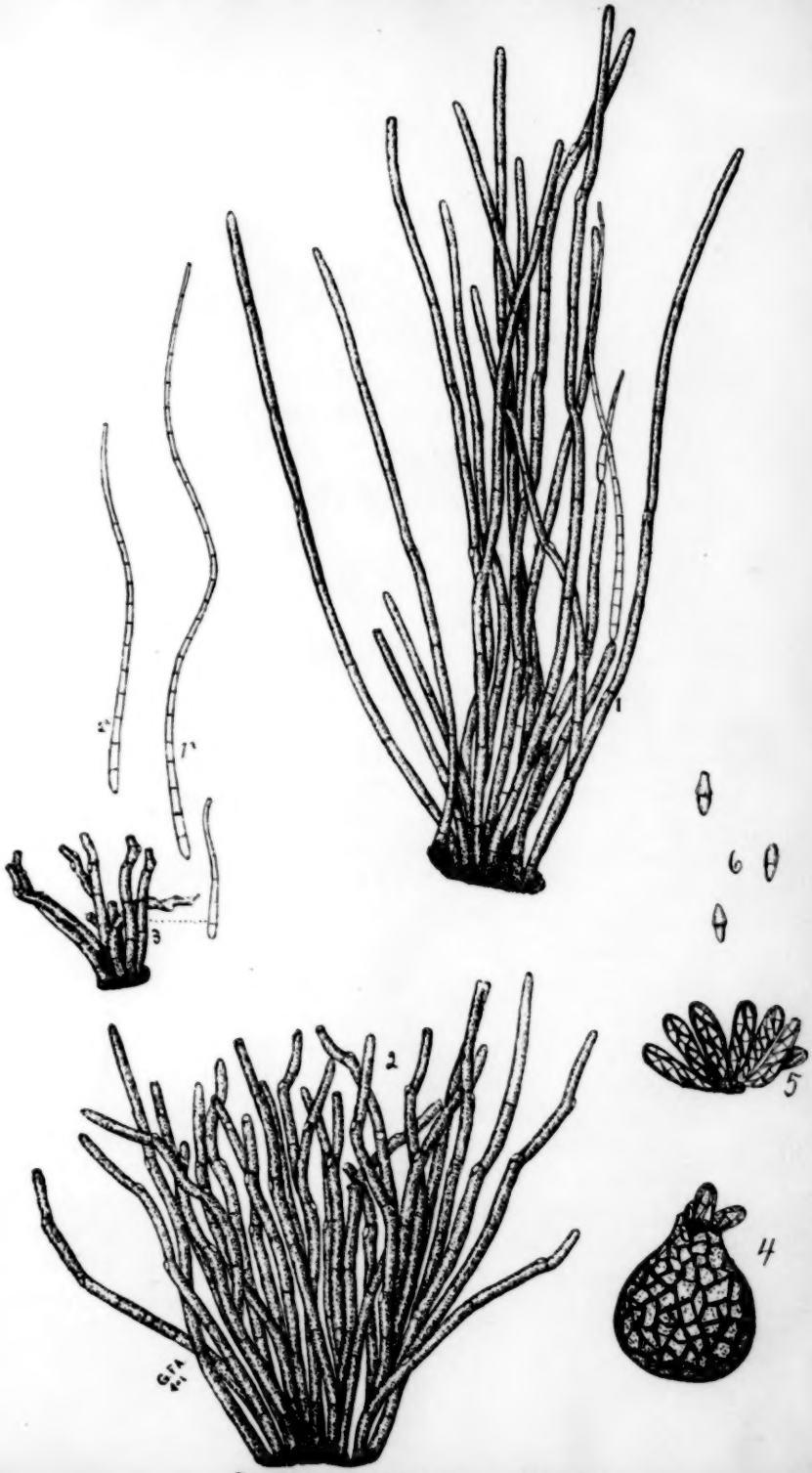
This is the text of the address of Vice-President Coulter before Sec. F., at the Washington meeting of the A. A. A. S.

Uredineæ—Notes on. J. C. Arthur. (Bot. Gaz. xvi. 225-227).

Three new species are described: *Puccinia medusæoides, P. Cyperi,* and *Uromyces Gentianæ,* and notes upon other species given.

Wild Columbine—The. Henry L. Clarke. (Vick's Mag. xiv. 286-288; illustrated).

Account and representation of *Aquilegia Canadensis.*



SPHÆRELLA GOSSYPINA. Atkinson.